Women, Mothers, and Health

Keeping the M in MTCT: Women, Mothers, and HIV Prevention

When the results of ACTG 076, a clinical trial supported by the National Institutes of Health, were published in 1994, it was already clear that the AIDS toll in sub-Saharan Africa and Asia would be immense. This landmark study showed that a single antiretroviral drug taken for a short time (i.e., not a lifetime) could reduce mother-to-child transmission (MTCT) of HIV by a stunning 67%.[1] Although the regimen was not practical for use in developing countries, its success pointed to a whole new avenue of prevention: antiretroviral drugs taken by pregnant HIV-infected women to prevent transmission to the infant.

We now have data on the effectiveness of several short-course oral regimens using zidovudine, zidovudine plus lamivudine, and nevirapine.[2–6] All but nevirapine require multiple dosing regimens, usually for several weeks, but they all work, some perhaps as effectively as the original complex 076 regimen.[7] Breastfeeding, widespread in Africa, attenuates the reduction of HIV transmission achieved by intrapartum antiretroviral regimens. However, the short-course zidovudine and nevirapine regimens have been shown to have long-term benefits to the breastfed infant.[8,9]

Today in North America and Europe, MTCT of HIV has declined greatly as a public health problem, and there are data to suggest that adoption of the 076 findings in standard pregnancy care has contributed to this decline.[10] In the poor countries of the developing world, however, not a single country is able to offer antiretroviral drugs routinely for the prevention of MTCT outside of the private sector. Not Thailand, where the first short-course zidovudine regimen of proven efficacy was introduced in early 1998.[11] Not Uganda, where the nevirapine regimen was proved to be about 50% efficacious in 1999.[4]

At the end of 1999, there were 15.7 million HIV-infected women and 1.3 million HIV-infected children worldwide.[12] Nearly all HIV-infected children younger than 10 years acquired HIV from their mothers and live in developing countries. To date, the nevirapine regimen tested in Uganda is the simplest and cheapest. It amounts to giving 1 dose of nevirapine to the HIV-positive mother while she is in labor and 1 dose to the infant within 3 days of birth. What accounts for this failure to translate such a simple regimen into saving lives?

Rosenfield and Figdor[13] tackle some of these concerns in this issue of the Journal. They do well to remind us that if we take care of mothers, mothers can take care of their infants. The question is not the safety of these regimens to the mother or infant; all available data show that the regimens are safe.[14] At issue is how we prioritize public health interventions and how we view, in the context of child survival, the benefits and obligations of women who are mothers.

Cost: the Main Barrier

It is not universally agreed that saving an infant born to an HIV-infected mother is a sensible use of public funds in poor countries. The infant will be born into extremely difficult circumstances; death is predicted at least for its mother and probably for its father. Should we invest public dollars in preventing infant deaths—an investment that will translate into a rising tide of orphans? In hard-hit countries, such as Zimbabwe, it is predicted that by 2005, 1 in 3 children younger than 15 years will be orphaned. The social cost of so many young people's being raised without parental or adult guidance will surely be very high.

It would be misleading, however, to suggest that policy debates have delayed implementing MTCT reduction, except possibly in South Africa. In sub-Saharan Africa, apart from South Africa and Botswana, the first and still insurmountable obstacle is that of cost. Africa will not see the declines in HIV infection among children that are seen in North America and Europe, unless funds are provided to governments to support these efforts. And this support must come from the rich countries—as debt forgiveness by the International Monetary Fund and World Bank, reduced pricing by pharmaceutical companies, generic drug production, and grants.

Models for HIV Testing

Despite the lack of national programs, experience in implementing reductions in MTCT in sub-Saharan Africa is growing. The combined efforts of United Nations agencies (Joint United Nations Programme on HIV/AIDS [UNAIDS], United Nations Children's Fund [UNICEF], and the World Health Organization [WHO]) have supported 11 pilot projects in different African countries, and more recently, the Call for Action initiative launched 18 projects in 6 African countries. In addition, antiretroviral drugs are being offered as part of the "best practice in obstetric care" in research initiatives that examine other interventions to reduce MTCT. These special projects suggest that delivering effective drugs to HIV-infected mothers for the reduction of MTCT will not be as simple as doling out pills. Indeed, the challenges of intrapartum management of syphilis—a condition treatable with a single penicillin injection—might have warned us of the difficulty of translating an effective program into care.[15]

Many pregnant African women do not choose to have an HIV test when offered one. As a consequence, most HIV-infected women are not identified and are not offered drugs, even in the adequately supported pilot setting. For example, in our site in a working-class area outside of Harare, we estimate that only 15% of HIV-infected women in the target population presently benefit from drugs to reduce MTCT.[16] The main obstacle is low rates of par-

ticipation in counseling and testing. We use the standard approach of individual pretest and posttest counseling. This "package" was developed for adults who wished to learn their status at a time when there was little or nothing in the way of therapy. One of our key aims was to prepare people for bad news by offering positive advice on healthy living and prevention.

Transferred to the care setting, where pregnant women are accustomed to following health workers' advice, voluntary counseling and testing makes new and unusual demands on the woman who has come for prenatal care. She must talk to a stranger about her thoughts and feelings. She is advised to try to raise these issues with her husband, with whom she probably rarely discusses such matters. Furthermore, she is told that the decision is hers to make. The responsibility (and presumably the blame) is hers. Is this fair?

Another approach is to make a positive recommendation, offer universal screening, and allow women to decline if they choose. But preliminary experience suggests that using an "opt out" approach (with universal HIV counseling and testing), instead of the standard "opt in" approach, to increase women's willingness to be tested may not result in greater access to antiretroviral drugs.[17] More women may have HIV tests, but they may not return for the results. In settings with high prevalences of HIV, where stigma and denial continue to characterize the response to HIV infection, we must conclude that women have very good reasons for not wishing to know their HIV status. In the tragic calculus of possibly saving her unborn child from HIV infection vs the social cost of knowing her own HIV-positive status, the cost of known HIV status is higher.

Why would this be so? Because a woman who learns her positive HIV status before her husband learns his own status very likely will be blamed for "bringing the infection home." And having a husband is crucial to the survival of the mother and her children. What sort of benefit is it to know that one is HIV positive, to face certain death, to be isolated and possibly cast out? For reduction of MTCT to occur, this social context must change. A program that increases the perception that women are to blame for HIV infection—a notion already entrenched in the public's awareness of prostitution—will not gain women's widespread support. It does no good to blame women or suggest that they are not good mothers. That men are "bringing HIV home" has been well established.

PCTC and Blame

Because it takes two to transmit HIV and two to make a child, women's health advocates and others have suggested we replace the "M" in MTCT with a "P" for "parent." Use of the term "PTCT" emphasizes the joint responsibility of both parents in the transmission of HIV to an infant. The father infects the mother and the mother then infects the child in a cascade of parent-to-child transmission.

In reminding us all that it is the infection of women as partners and wives that creates the problem of mother-to-child transmission, PTCT is a useful term. But that is its only utility. The father may not be the man who infected his wife, although he usually is. It might have been a previous partner. Should we use "adult-to-child transmission" (ATCT)? But this term, like PTCT, lacks biological specificity. It is true but vague, and greater vagueness will not help our prevention efforts.

One of the challenges of building the social context into our prevention strategies is to retain the biological specificity of what we know about HIV. Yes, AIDS is a disease of poverty, and it is a disease of inequality between the sexes. But it is also an infectious disease caused by a virus. For the infant, it is maternal infection that matters, and it is mother-to-child transmission that we seek to interrupt. Mother-to-child transmission is an accurate phrase, and as a paradigm it has yielded the highly effective antiretroviral approaches. There are millions of women in the world today who are HIV positive. We cannot prevent their HIV infection. Women are more than mothers, but many women see motherhood as a benefit, not only an obligation. For many HIV-infected women, a better chance to have an uninfected child is the only good news there is.

Taking Care of Women

This brings us to the last point raised by Rosenfield and Figdor: What about the treatment of women? If we care about child survival, what should be done about maternal survival? Certainly the death of a young mother carries high social costs. A recent review by Foster and Williamson[18] suggests that the loss of a father is just as costly, because he is often the breadwinner. Here we should ask, "What about the treatment of parents?" If we look carefully at how MTCT is being vanquished in the wealthy nations, we see that success increasingly is due not to specific MTCT regimens but to the treatment of adult HIV infection.[19] Intensive antiretroviral therapy for the mother's infection also reduces HIV transmission to her infant.

If we take care of women, we will take care of mothers. If we take care of mothers, we will take care of infants. If we fail to begin to think about the therapeutic use of antiretroviral drugs in Africa, we risk (as DeCock and others[20] wrote in the Journal in 1993) caring about AIDS in Africa but not about Africans with AIDS. □

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